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Solar Turbines Incorporated

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May 9, 1990

Mr. Donn Lipera Hazardous Materials Specialist Hazardous Materials Management Division County of San Diego Department of Health Services 1700 Pacific Highway San Diego, CA 92101-2417

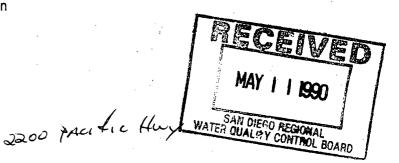
Subject:

Progress Report

Solar Turbines Incorporated

Harbor Drive Facility

(Release #T00036/H08828)



Dear Mr. Lipera:

This is a Progress Report for Solar's Harbor Drive facility. Enclosed are the revised portions of the Site Assessment Work Plan in response to comments made by you and Mr. Jim Munch (RWQCB) at the February 22, 1990 meeting. Please refer to the March 20, 1990 Progress Report for a detailed description of Solar's formal response to these comments. The following is a description of the changes made to the Site Assessment Work Plan document:

- In response to HMMD comment #1, Solar has increased the number of soil borings to a total of 33. This represents the addition of 12 new soil borings. The appropriate modifications were made to Figure 5-1 and Section 5.0 of the text to reflect these changes.
- In response to HMMD comment #2, Solar has modified Figure 5-1 and the text in Section 5.0 to present the soil boring locations at a scale that more clearly depicts each boring's approximate location relative to the facility's structures and former UST locations. A grid system is now employed and divides the facility into four blocks with three being enlarged to better illustrate the soil boring and piezometer locations. Thus, Figure 5-1 is now divided into four separate figures, 5-la through 5-ld. Figure 5-la depicts the facility with the reference grid system superimposed onto it, and serves as a key for the remaining three detail figures. Figures 5-1b through 5-1d are close-up "window" grid blocks for the three areas that contain soil borings and/or piezometers.
- In response to HMMD comment #3, Solar added EPA 418.1 test methodology to the soil sample analyses for those areas suspected of having been exposed to heavy hydrocarbons. Revisions have been made to Table 5-1 and the text in Section 5.0 to reflect these changes.

Solar Turbines

Mr. Donn Lipera May 9, 1990 Page 2

- In response to HMMD comment #4, Solar has made the appropriate changes to the Site Assessment Task Schedule (Table 11-1) to indicate non-specific months instead of specific weeks. In addition, the task designation "Agency Review" was changed to a subtask ranking under the task heading of "Work Plan." "Response to Comments" was changed to "Solar Response to Comments", and "Authorization to Proceed From Solar" was changed to "Authorization to Commence Work." The appropriate time line was added to the new subtask "Agency Review."
- Other changes to the Work Plan include modifications of Figure 2-2 to correct a typographical error in listing tank numbers DTT1HD and DTT2HD, and modification of Table 2-2A to correct a typographical error in listing tank numbers #230220 and #230221. Also, the Table of Contents was updated to reflect the changes made to Section 5.0.

In preparation for commencement of site assessment activities, the locations of all soil borings and piezometers are being physically identified at the facility, and the required well permits are in the process of being obtained from the County of San Diego, Department of Health Services (SDDHS). In support of these activities, a detailed topographical survey of the property is being performed that will satisfy all applicable 40 CFR and CCR Title 23 regulations pertaining to the planned site assessment.

The next Progress Report will be submitted in early June. Should you have any questions or require more information, please do not hesitate to contact me at 554-5191.

Sincerely,

Robert D. Bush

Manager, Environmental Affairs

borth Bun

cc:

Jim Munch, RWQCB

Jim Potter, Cal DHS, Long Beach Steve Neugebauer, SNR Company

RDB/p1 1345G



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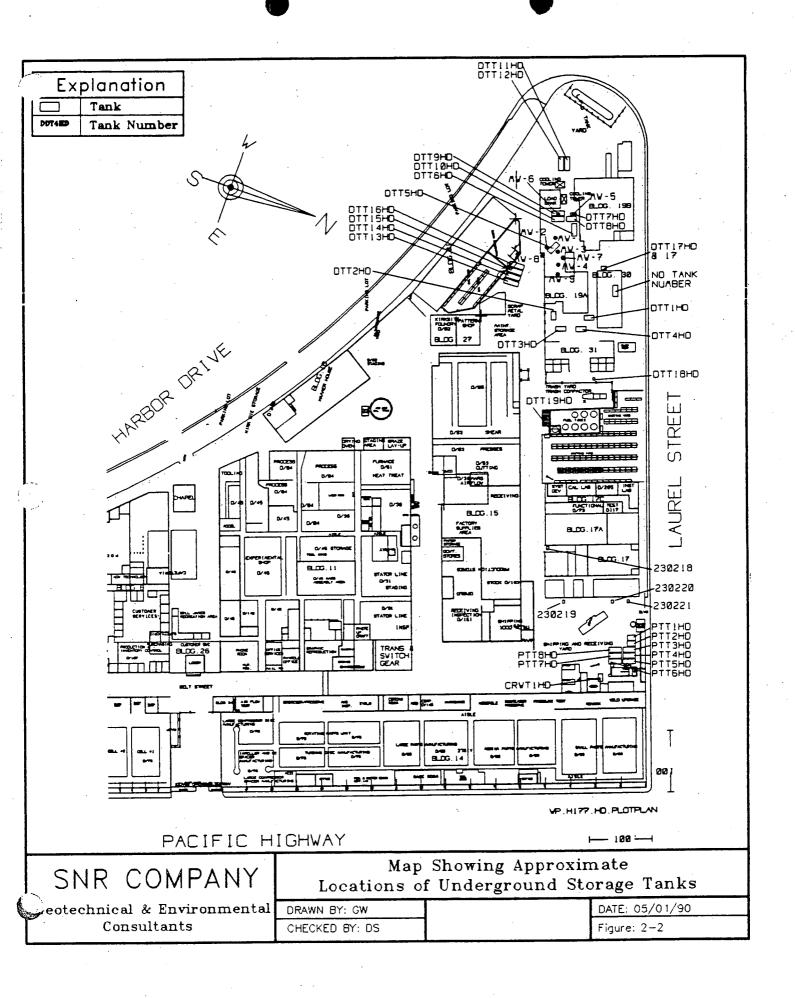
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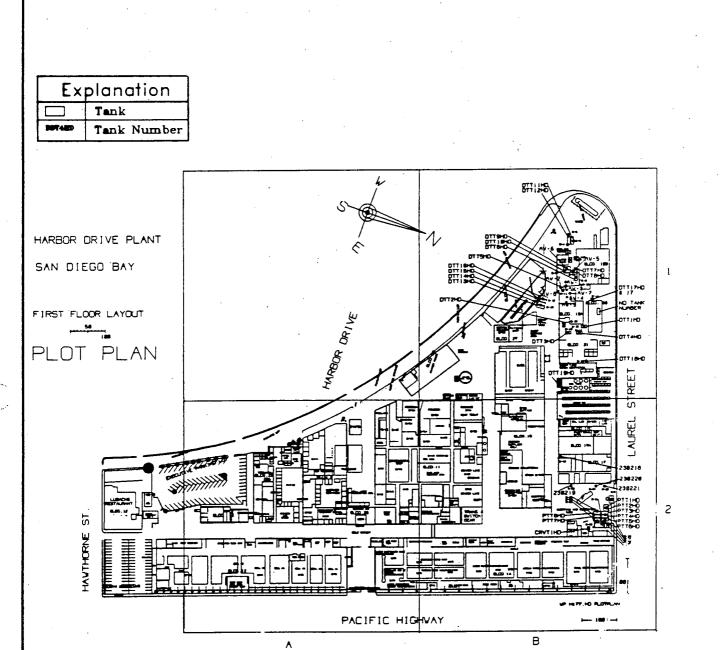
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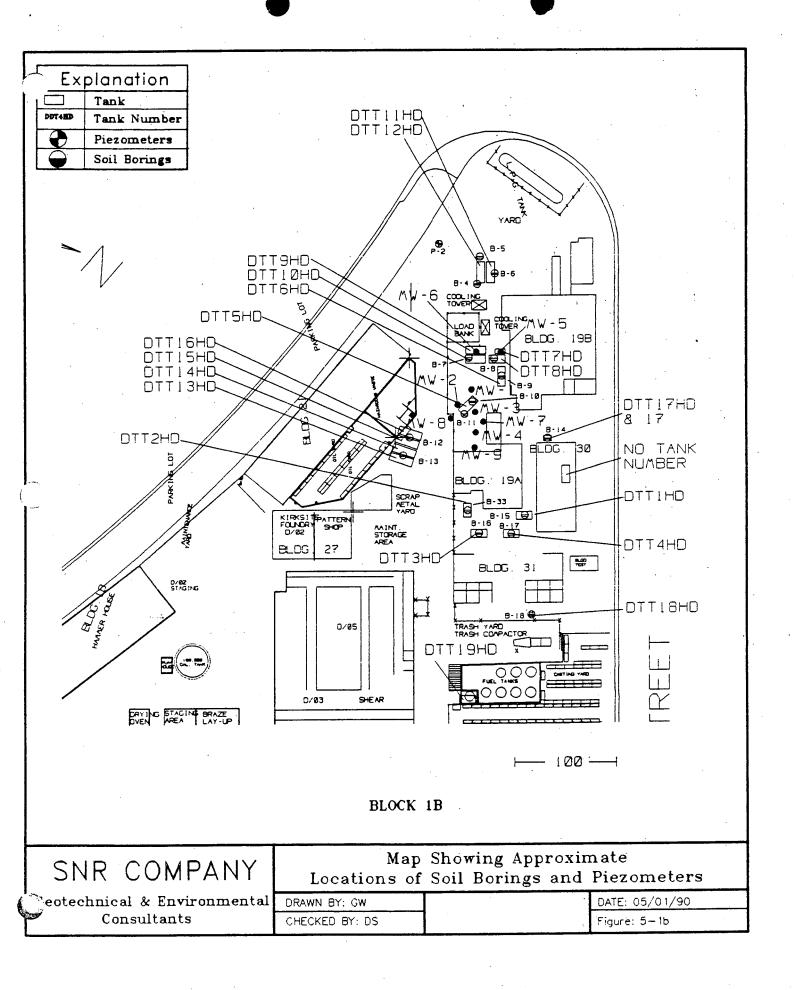


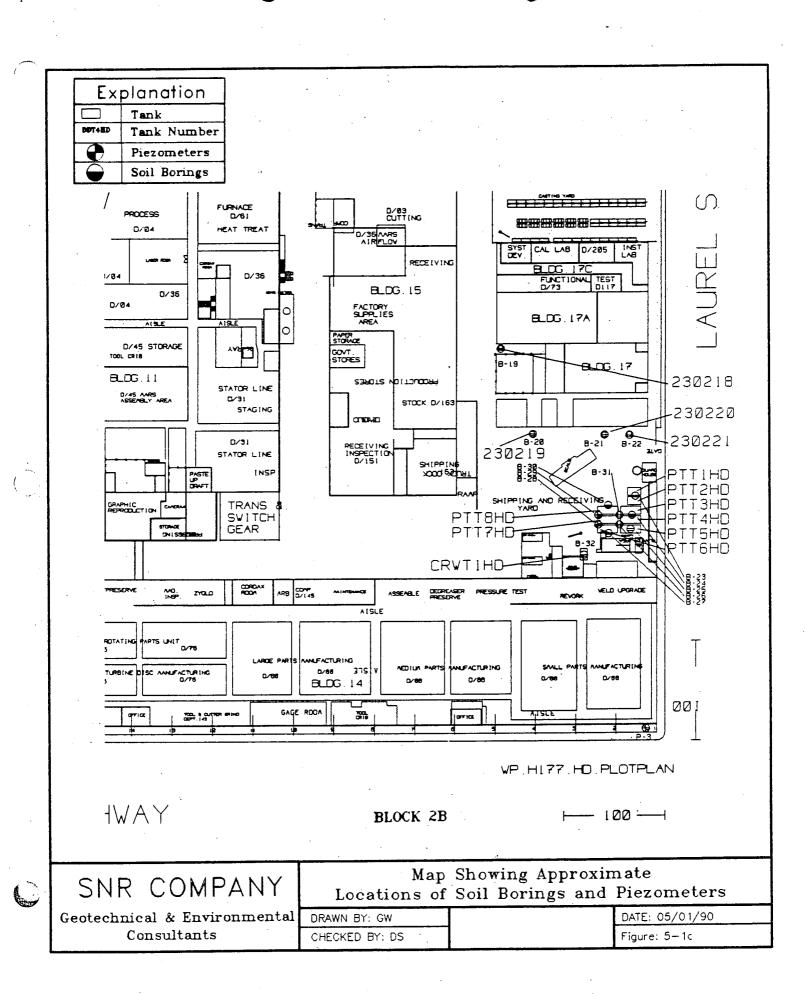
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Map Showing Approximate Locations of Soil Borings and Piezometers

Geotechnical & Environmental
Consultants

DRAWN BY: GW CHECKED BY: DS DATE: 05/01/90 Figure: 5-1a





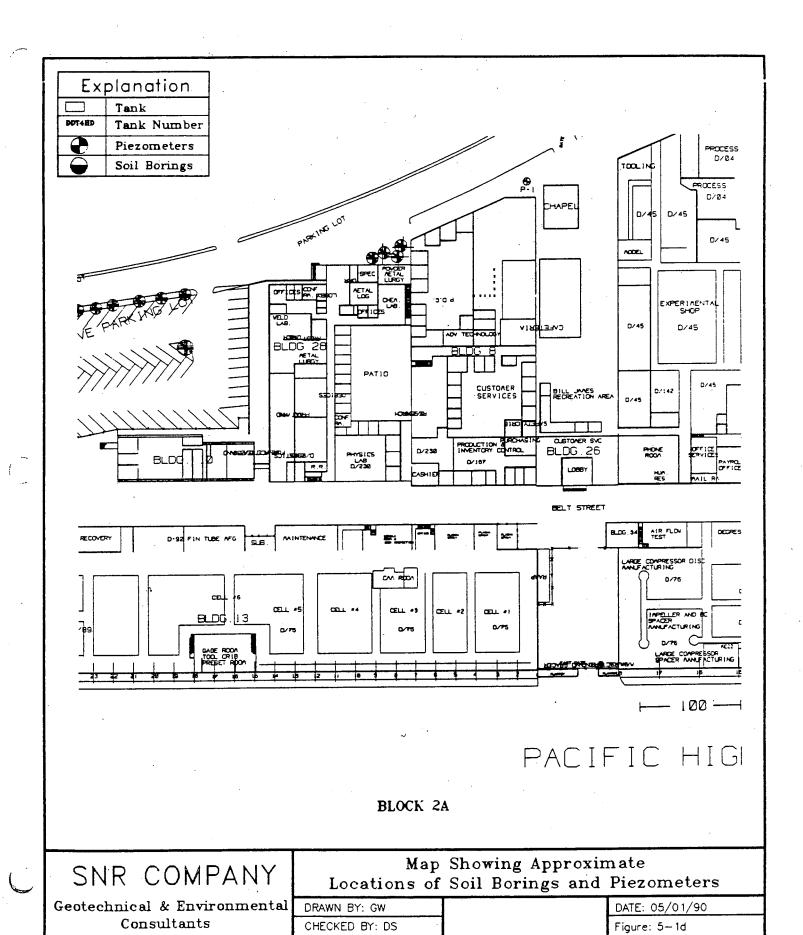


TABLE 2-1

SUMMARY OF UNDERGROUND TANK REMOVAL OPERATIONS SOLAR TURBINES HARBOR DRIVE FACILITY SAN DIEGO, CALIFORNIA

TANK #	CAPACITY (GALLONS	S) CONTENTS	COMMENTS
DHITTD	1,000	NR	Abandoned in-place (?) near east doorway of Building 19A-1 (Solar in-house engineering records).
DTT2HD	1.000	JP-4	Removed 10/10/80 (WCC,1980a,b). Free product encountered.
DTT3HD	5,000	Jet A	Tank 9 in WCC report (1986), Removed 6/11/86, Permit #AT0133. No evidence of leakage.
DTT4HD	5,000	JP-5	Tank 10 in WCC report (1986), Removed 6/11/86, Permit #AT0133. No evidence of leakage.
DTT5HD	10,000	JP-4	Tank 11 in WCC report (1986); Tank 5 in WCC report (1985a), Removed 6/9/86, Permit #AT0133. Free product encountered.
DTT6HD	5,000	Diesel	Removed 10/10/80 (WCC,1980a,b). Free product encountered.
DTT7HD	•	Diesel	Removed 11/8/84 (WCC, 1984). Obvious holes in tank.
DTT8HD		Diesel	Removed 10/14/80 (WCC,1980a,b). Free product encountered.
DTT9HD	_*	Jet A	Removed 11/8/84 (WCC, 1984). No evidence of leakage.
DTT10HD		JP-4	Removed 11/8/84 (WCC, 1984). No evidence of leakage.
DTT11HD	•	DF-2	Tank 12 in WCC report(1986) Removed 6/11/86, Permit #AT0133. No evidence of leakage.
DTT12HD	12,000	Diesel	Tank 13 in WCC report (1986) Removed 6/11/89, Permit #AT0133. Obvious holes in tank.
DTT13HD	20.000	DF-2	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT14HD		DF-2	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT15HD	,	DF-2	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT16HD	,	Kerosene	Removed 5/28/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
17	220	Mixed	Removed 10/10/80 (WCC, 1980a,b). No evidence of leakage.
DTT17HD		Gasoline	Removed 5/29/85 (1985b), Permit #AT0049; Same location as Tank 17A? Some soil staining.
DTT18HD	220	Diesel	Removed 5/29/85 (WCC, 1985b), Permit #AT0049. No evidence of leakage.
DTT19HD		TCE/TCA(?)	Reportedly abandoned in-place, filled with sand (WCC 1985d).
NR	NR	NR	Sand-filled tank reportedly located below Building 30 control room (Solar in-house-engineering records).
PTT1HD	6,000	Gasoline	Tank 8 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT2HD	6,000	JP-4	Tank 7 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT3HD	12,000	Diesel	Tank 6 in WCC report(1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT4HD	12,000	Gasoline	Tank 5 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTTSHD	12,000	Kerosene	Tank 4 in WCC report (1986); removed 5/30/86, Permit #AT0133. No evidence of leakage.
PTT6HD	12.000	Kerosene	Tank 1 in WCC report (1986); removed 6/4/86, Permit #AT0133. Obvious holes in tank.
PTT7HD	12,000	Kerosene	Tank 2 in WCC report (1986); removed 6/4/86, Permit #AT0133. Obvious holes in tank.
PTT8HD	12,000	Kerosene	Tank 3 in WCC report (1986); removed 6/4/86, Permit #AT0133. Obvious holes in tank.
CRWT1H	D 4,000	Spent Coolant	Tank 14 in WCC report (1986); removed 8/29/86, Permit #AT0133. No evidence of leakage.
230218	280	Lube Oil	Tank 1 in WCC report (1985c); removed 12/9/85, Permit #AT0111. No evidence of leakage.
230219	280	Lube Oil	Tank 2 in WCC report (1985c); removed 12/9/85, permit #AT0111. No evidence of leakage.
230220	280	Lube Oil	Tank 3 in WCC report (1985c); removed 12/9/85, permit #AT0111. Abundant soil staining.
230221	280	Lube Oil	Tank 4 in WCC report (1985c); removed 12/9/85, permit #AT0111. Noted hydrocarbon odor.
Notes:	TANK #	=	Tank Designation Per San Diego County Permit Applications and Solar (1985)
,110163.	DF		Diesel Fuel
	NR	=	No Records Available At This Time
	WCC	=	Woodward Clyde Consultants
	TCE	-	Trichloroethylene
	TCA	= ,	Trichloroethane
	Lube Oil	=	Turbine Lubricating Oil
	Permit #	=	County of San Diego Department of Health Services Underground Storage Tank Removal
	i cimit #	_	Permit Application Number

TABLE 2-2A

SUMMARY OF PREVIOUS LABORATORY ANALYSIS OF SOIL AND LIQUID SAMPLES SOLAR TURBINES HARBOR DRIVE FACILITY SAN DIEGO, CALIFORNIA

	Sample	Sample	TPH/TRPH	Solvents	
Tank	Depth/Type		(mqq)	Detected	Comments
	1		UPP.IQ	- Dottected	·
DTT1HD	NA	NA	NA	NA	i i
DTT2HD	NR/S	10	660	NA	Base of excavation (sidewall)
	NR/S	11	260	NA	6" below excavation
	NR/L	8	1	Suspected	Free product - Not Diesel
DTT3HD	NA	NA	NA	NA	Trouble Troubles
		1	1		
DTT4HD	10'/L	SOL-6-11-3	† · · · · · · · · · · · · · · · · · · ·	YES	MC, TCA, C, N, P, B, T, E, X
	8.5'/S	SOL-6-11-3	2,545	YES	B,T,X
			1		
DTT5HD	10'/L	SOL-6-9-1	NA	YES	PCE, MC, TCA, B, T, X, C, N, P
	9'/SS	SOL-6-9-5	87.57	YES	B.T.X
	i				
DTT6HD	NR/S	3	864	NA	Bottom of excavation
	NR/S	4	1210	NA	Botton side wall of excavation
	NR/S	5	109	NA	18 inches above base of excavation (sidewall)
	NR/S	6	852	NA	\$ inches below excavation
	NR/S	7	260	NA	Directly below tank
	NR/L	1	35.7	Suspected	Not diesel
	NR/L	2	53.3	NA	
		_		1	
DTT7HD	NR/S	HD-04	19,400	NA	8-10' below grade (sidewall)
	NR/S	HD-05	30,300	NA	8-10' below grade (sidewall)
		1	100,000		F 10 Below Blade (Sidewall)
DTT8HD	6'/S	12	56	NA	Below groundwater table (sidewall)
	NR/S	13	194	NA	Directly below tank
•	NR/S	15	123	NA	6 inchess below excavation bottom of tank
	NR/L	14	52.4	NA	Free product
		1	100.1	l .	· · · · · · · · · · · · · · · · · · ·
DTT9HD	NR/S	HD-01	51	NA	8-10 below grade (sidewall)
	NR/S	HD-02	1.370	NA	8-10' below grade (sidewall)
			1	1	o to boton Brass (ordenate)
DTT10HD	NR/S	HD-03	3.950	NA	8-10' below grade (sidewall)
				1	Sind (sind)
DTT11HD	11'/L	SOL-6-11-1	542.5/429	YES	MC, TCA, B, E, T, X, C, N
	9'/S	SOL-6-11-2	542	YES	B,T,X
					[-,-,-
DTT12HD	9'/S	SOL-6-11-2	542	YES	B.T.X
					-,-,-
DTT13HD	NR/S	13A	<5	NA	10-14 below grade
	NR/S	13B	5.04	NA	10-14 below grade
			_		are the same of th
DTT14HD	NR/S	144	2.9	NA	10-14 below grade
	NR/S	14B	379	NA ·	10-14 below grade
		[]	15.15	1	lo 11 below Brade
DTT15HD	NR/S	15A	1268	NA	10-14 below grade
	NR/S	15B	24.9	NA	10-14 below grade
				l	io ii belon grade
DTT16HD	NR/S	16A	13.9	NA	10-14 below grade
	NR/S	16B	1.7	NA	10-14 below grade
		1	1	I	
17	NR/S	16	522	NA	Base of excavation
	NR/S	17	50.2	NA	6" below excavation
	1	1		l .	- COLON CACAMATON
1	6.5'/S	17	2.947	NA	Base of excavation
DTT17HD		1	12,54.	l ,	DING OF CACATALION
DTT17HD	15.0.0	l .	1		
DTT17HD	8'/S	18	1.770	NA	Base of excavation
		18	1,770	NA	Base of excavation
		18 NA	1,770 NA	NA NA	Base of excavation
DTT18HD	8'/S				Base of excavation

TABLE 2-2A (Continued)

SUMMARY OF PREVIOUS LABORATORY ANALYSIS OF SOIL AND LIQUID SAMPLES SOLAR TURBINES HARBOR DRIVE FACILITY SAN DIEGO, CALIFORNIA

on stimination in	Sample	Sample	TPH:/TRPI	Solvents	
Tank	Depth/Type		(ppm)		Comments
PTT1HD	10'/L	NA	NA .	NO	B,T,E,X
PTT2HD	NA	NA	NA	NA	
PTTSHD	NA	NA	NA	NA	
PTT4HD.	NA	NA	NA	NA.	
PTT5HD	10.5'/L	SOL-5-30-1	NA	YES	B, T, E, X, N, A, Pb
PTT6HD	10.5'/L	SOL-6-4-1	NA	YES	E, T, X, Pb
PTT7HD	NA	NA NA	NA	NA	
PTT8HD	9'/5	SOL-6-4-7	ŅA	NO	B,T,E,X
CRWTIHD	9.5'/\$	SHD-BOT-2	NA	YES	BBP, BP, D, HCB, TCE, DBCM, DCP, H
				F 6 00000 0	
230218	NR/S	T1-1	1,119	YES	PCE, TCE
	NR/S	T1-2	907	YES	PCE, TCE
	NR/S	T1-3	1,828	YES	PCE, TCE, TCA, C
	NR/S	SHD-TF1	49.9	YES	PCE, TCE, TCA, MC
230219	NR/S	T2-1	618	YES	PCE. TCE
	NR/S	T2-2	136	YES	PCE, TCE
	NR/S	T2-3	1.970	YES	PCE, TCE, TCA
	NR/S	SHD-TF2	45.1	YES	PCE, TCE, TCA, MC, X
230220	NR/S	T3-1	18	YES	PCE
230221	NR/S	T4-1	165	YES	PCE, TCE, TCA, C
	1				

NA	Not Analysed
NR	Not Reported
B,T,E,X	Benzene, Toluene, Ethylbenzene, Xylenes
PCE	Tetrachloroethylene
TCE	Trichloroethylene
TCA	Trichloroethane
MC	Methylene Chloride
TPH	Total Petroleum Hydrocarbons
TRPH	Total Recoverable Hydrocarbons
C	Chloroform
BBP	Benzyl Butyl Phthalate
BP	Bis (2-ethylhenyl) Phthalate
D	2,4 Dinitrotoulene
HCB	Hexachlorobenzene
DBMC	Dibromochloromethane
L	Liquid Sample
` S	Soil Sample
DCP	cis 1,3 Dichloropropene
N	Napthalene
P	Phenanthrene
Α	Acenaphthylene

TABLE 5-1 Laboratory Methods and Action Levels

	SW-846	CA DHS Action Levels	Proposed EPA	CA STLC	CA ΠLC
Compound	Method	For Drinking Water (mg/L)	TCLP Levels	mg/L	mg/kg
Antimony	6010			15	500
Arsenic	7060		5.0	5.0	500
Barium	6010		100	100	10,000
Beryllium	6010		·	0.75	75
Cadmium	6010		1.0	1.0	100
Chromium	6010		5.0	560	2500
Chromium VI	7195,7196,or7197			5	500
Cobalt	6010			80	8,000
Copper	6010	·		25	2,500
Fluoride	6010			180	18,000
Lead (Inorganic)	6010	·	5.0	5.0	1,000
Mercury	7470/7471	·	0.2	. 0.2	20
Molybdenum	6010		-	350	3,500
Nickel	6010			20	2,000
Selenium	7740	ŧ	1.0	1.0	100 -
Silver	6010		5.0	5	500
Thallium	7841			7.0	. 700
Vanadium	6010	•		24	2,400
Zinc	6010			250	5,000
·					
Total Petroleum Hydrocarbon	8015/418.1				,
Benzene	624/8240	0.0007	0.07		
Toluene	624/8240	0.10	14.4		
Ethyl Benzene	624/8240	0.68			
Xylenes	624/8240	0.62			
Methlylene Chloride	624/8240	0.040	8.6	ļ	
Chloroform	624/8240		0.07		
Tetrachloroethylene	624/8240	0.004	0.1		•
Trichloroethene	624/8240	0.005	0.07		
Trichloroethane	624/8240	0.200	25		
Dibromochloromethane	624/8240				
cis 1,3 Dichloropropene	624/8240				
Napthalene	625/8270				
Acenaphthylene	625/8270				
Benzyl Butyl Phthalate	625/8270				
Bis (2 ethylhexyl) Phthalate	625/8270				
2,4 Dinitrotoluene	625/8270		0.13		
Hexachlorobenzene	625/8270		0.13		
Heptachlor	625/8270	}			

TABLE 11-1

SITE ASSESSMENT WORK PLAN SOLAR TURBINES HARBOR DRIVE FACILITY SAN DIEGO, CALIFORNIA

TASKS - SCHEDULE

	Calendar Year Calendar Year19891990						Anticipated Monthly Schedule Of Remaining Site Assessment Activities											
Work Plan Submittal Agency review	NOV	DEC	JAN	FEB	MAR	APR												
Solar Response to comments Authorization to commence work Compile/Review Existing Data Air photos Site Records FOIA material RWQCB, DHS, SDDHS (HMMD) files					20220233 2020000	- 31												
On site H & S Recconnaissance Existing Wells Locate & review logs Redevelopment, if applicable Sampling											1000					\$(V)		
Laboratory analysis Continuous water level monitoring Slug tests Plugging and abandonment, if logs unavailable Drilling & Sampling		43,233				*****							U70 1100			1473		
PHASE I Soil Borings & Piezometers Lay out drilling locations Approval by Solar Turbines Drilling, soil sampling and piezometer install Develop piezometers GW sampling & fluid level measurements Continuous water level monitoring Laboratory analysis																		
PHASE II Monitoring Wells Installation Lay out drilling Locations Approval by Solar Turbines Install monitoring wells Monitoring well development / slug tests Groundwater sampling Laboratory analysis																		
Geologic Analysis Subsurface geology Hydrostratigraphic units								45 V 35 53 V 35										
Hydrologic Analysis Water levels and gradients Tidal effects Transport			\$.38Q								Michiglian State (Carl							
Extent of Waste Constituents Identification of constituents present Extent in soils Extent in ground water Health & Environmental Effects		564															<i>3</i>	
Proposed remediation (if needed) Scope of additional exploration, if needed Plan for remediation of soils Plan for remediation of ground water																	eru - 6 4000	311
Submittals Progress Reports Final report of site assessment				•												199/4	ata/10	48/1